

GENERAL CONSTRUCTION NOTES

1. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE NOT GUARANTEED AS TO ACCURACY NOR COMPLETENESS. ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK MUST BE ACCURATELY LOCATED PRIOR TO COMMENCING WORK. REQUEST FIELD LOCATIONS OF UNDERGROUND FACILITIES THROUGH THE UTILITY PROTECTION CENTER AND ANY UTILITY OWNERS THOUGHT TO HAVE FACILITIES IN THE AREA. FOR UTILITY MARKING, CALL THE UTILITY PROTECTION CENTER, INC. AT 1-800-282-7411 AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION. MAINTAIN A MINIMUM 12-INCH SEPARATION BETWEEN THE PROPOSED PIPE LINE AND EXISTING UTILITIES.
2. ALL AREAS OF NEW UTILITIES INSTALLATION SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE. CONTRACTOR TO MAINTAIN DITCHES AND OTHER DRAINAGE FEATURES.
3. CONTRACTOR IS RESPONSIBLE FOR PROPERLY DISPOSING OF ALL CONSTRUCTION DEBRIS.
4. ALL TRENCHES ARE TO BE CLOSED AT THE END OF EACH WORK DAY.
5. ANY FENCING, GUARDRAILS OR HIGHWAY SIGNAGE REMOVED DURING CONSTRUCTION MUST BE RESTORED TO ORIGINAL CONDITION AS SOON AS POSSIBLE AFTER PIPE INSTALLATION.
6. MAINTAIN A SUPERINTENDENT/FOREMAN ON THE PROJECT AT ALL TIMES DURING CONSTRUCTION WITH A THOROUGH KNOWLEDGE AND UNDERSTANDING OF THE CONTRACT DOCUMENTS.
7. THE CONTRACTOR WILL BE REQUIRED TO FURNISH GDOT AND THE CITY OF MONTICELLO WITH AS-BUILTS OF THE RELOCATED UTILITIES.
8. ALL EXISTING PIPELINES THAT ARE SCHEDULED TO BE ABANDONED-IN-PLACE SHALL BE FILLED WITH FLOWABLE FILL AND CAPPED PER GDOT SPECIFICATIONS. ALL COSTS FOR ABANDONING-IN-PLACE SHALL BE INCLUDED IN UNIT PRICE FOR NEW REPLACEMENT OF WATER, SEWER OR GAS PIPELINE.

DEPARTMENT OF TRANSPORTATION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE ROADS FREE OF DIRT AND DEBRIS AT ALL TIMES.
2. CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IN AREAS WHICH RESTRICT SIGHT DISTANCE.
3. CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AND POSTAL SERVICE THROUGHOUT THE DURATION OF THE PROJECT.
4. THE ROADWAY AND SHOULDERS SHALL BE SHORED PROPERLY DURING ANY TRENCHING ACTIVITY WITHIN RIGHT-OF-WAY. BACKFILLING OF ROADWAY AND SHOULDERS ARE TO MEET MINIMUM GDOT REQUIREMENTS FOR COMPACTION.

NATURAL GAS FACILITIES RELOCATION NOTES

1. THE NORMAL OPERATING PRESSURE OF THE EXISTING LOW-PRESSURE NATURAL GAS SYSTEM IS APPROXIMATELY 22 PSIG. ENSURE THAT THE NATURAL GAS SYSTEM DOWNSTREAM OF CONSTRUCTION RECEIVES AN UNINTERRUPTED FLOW OF NATURAL GAS AT ALL TIMES DURING CONSTRUCTION. IF, AT THE FAULT OF THE CONTRACTOR, THE FLOW OF GAS IS INTERRUPTED, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY THE OWNER ASSOCIATED WITH ANY LOSS OF FLOW.
2. INSTALL PROPOSED GAS LINE PIPE WITH A MINIMUM COVER OF 36 INCHES BELOW FINAL GRADES, UNLESS OTHERWISE NOTED. MAINTAIN A MINIMUM 18-INCH SEPARATION BETWEEN THE PROPOSED LINE PIPE AND EXISTING DRAINAGE STRUCTURES AND UTILITIES.
3. IT IS THE INTENT OF THIS CONTRACT THAT THE NEW GAS MAINS BE INSTALLED AS INDICATED ON THE DRAWINGS, BUT THAT THE NEW GAS MAINS BE SHIFTED AS NECESSARY WITHIN RIGHTS-OF-WAY TO AVOID CONFLICTS WITH OTHER EXISTING UTILITIES, DRAINAGE STRUCTURES, TRAFFIC CONTROL DEVICES AND SIMILAR FEATURES. NO CLAIMS FOR ADDITIONAL PAYMENTS OR TIME WILL BE CONSIDERED FOR FAILURE TO LOCATE EXISTING UTILITIES, ETC. AND COORDINATE GAS MAIN ROUTE IN ADVANCE OF GAS MAIN INSTALLATION OPERATIONS.
4. ALL COSTS FOR CONNECTING TO EXISTING GAS MAIN, CUTTING AND CAPPING EXISTING GAS MAIN, ABANDONING-IN-PLACE EXISTING GAS MAIN, TESTING AND CLEANING NEW GAS MAIN AND OTHER RELATED WORK REQUIRED FOR A COMPLETE AND OPERATIONAL NEW GAS MAIN SHALL BE INCLUDED IN THE UNIT PRICE FOR STEEL GAS MAIN, 2-INCH (L.F.).

WATER LINE FACILITIES RELOCATION NOTES

1. INSTALL PROPOSED WATER LINES WITH A MINIMUM COVER OF 48 INCHES BELOW FINAL GRADES.
2. BENDS INDICATED IN THE DRAWINGS ARE ESTIMATED ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF BENDS AND OTHER REQUIRED FITTINGS DEEMED NECESSARY. CONTRACTOR SHALL NOT EXCEED THE MANUFACTURER'S MAXIMUM DEFLECTION ANGLE BETWEEN JOINTS.
3. CONTRACTOR SHALL INSTALL MECHANICAL JOINT RESTRAINT AT ALL BENDS AND FITTINGS.
4. CONTRACTOR SHALL MAKE SERVICE TAP ON NEW WATER LINE SUCH THAT THE NEW SERVICE LINE INSTALLATION SHALL TERMINATE ADJACENT TO EXISTING WATER METER BOXES. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF MONTICELLO FOR PROPERTIES WHICH DO NOT CURRENTLY HAVE WATER METER BOXES ALONG THE RIGHT-OF-WAY AND IN FRONT OF INDIVIDUAL PROPERTIES.
5. ALL EXISTING SERVICES SHALL BE REPLACED WITH NEW MATERIALS FROM WATER MAIN TO METER, WHICH INCLUDES:
- A. DOUBLE STRAP SERVICE SADDLE (SEPARATE PAY ITEM)
 - B. CORPORATION STOP
 - C. 3/4" MINIMUM COPPER SERVICE LINE - TYPE K ROLLED TUBING
 - D. ADAPTER FITTINGS AS REQUIRED
 - E. CURB STOP
 - F. 2" PVC CONDUIT CASING FROM CORPORATION STOP TO 5' BEYOND PAVEMENT EDGE.

- ALL MATERIAL EXCEPT DOUBLE STRAP SERVICE SADDLE TO BE INCLUDED IN UNIT PRICE OF WATER SERVICE LINE, 3/4-INCH (L.F.).
6. ALL WATER MAINS SHALL BE PRESSURE TESTED, SETERILIZED AND PASS THE BACTERIA TEST PRIOR TO CUSTOMER TIE-IN.
7. DURING ALL TIMES OF CONSTRUCTION, CONTRACTOR IS TO HAVE ON HAND ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE A REPAIR OF ANY POTENTIAL AND/OR UNFORESEEN EXISTING WATER MAIN AND/OR SERVICE LINE BREAK.

SANITARY SEWER RELOCATION NOTES

1. ALL SANITARY SEWER MATERIALS AND CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE LATEST GDOT DESIGN STANDARDS AND SPECIFICATIONS.
2. BEDDING FOR ALL TYPES OF SANITARY SEWER PIPE SHALL BE TYPE 4 AT ALL DEPTHS (NO SEPARATE PAY)
3. CONTRACTOR TO FURNISH TEST PLUGS AND RISERS (NO SEPARATE PAY)
4. IN LIEU OF REQUIRED INFILTRATION TEST, AT THE CONTRACTOR'S OPTION, THE FOLLOWING AIR TESTING MAY BE PERFORMED:
- a. NOMINAL 4-INCH TO 8-INCH PIPE: AFTER COMPLETING BACKFILL OF SEWER LINE SECTION, CONDUCT A LOW PRESSURE AIR TEST DEPENDING ON PIPE MATERIAL IN ACCORDANCE WITH ASTM C924, ASTM C828, ASTM F1417, OR UNI-B-6 GUIDELINES FOR INSTALLATION ACCEPTANCE. DUCTILE IRON PIPELINES SHALL BE TESTED IN ACCORDANCE WITH ASTM F1417 OR UNI-B-6 REQUIREMENTS. PERFORM SUCH TESTS USING THE FOLLOWING PROCEDURES.
 - 1) TEMPORARILY PLUG LINE SEGMENT BETWEEN TWO (2) MANHOLES USING PLUGS HAVING AIR TIGHT FITTINGS THROUGH WHICH LOW PRESSURE AIR CAN BE INTRODUCED INTO THE PIPE SEGMENT BEING TESTED
 - 2) INTRODUCE LOW PRESSURE AIR INTO THE TEST PIPE SEGMENT UNTIL THE INTERNAL AIR PRESSURE REACHES FOUR (4 0) PSIG ABOVE THE GROUND WATER PRESSURE, IF ANY
 - 3) WAIT AT LEAST TWO (2) MINUTES FOR AIR TEMPERATURE IN THE TEST SEGMENT TO STABILIZE WHILE INTERNAL AIR PRESSURE REMAINS NO LESS THAN THREE AND ONE HALF (3 5) PSIG ABOVE THE GROUND WATER PRESSURE
 - 4) ACCURATELY DETERMINE THE ELAPSED TIME FOR AN INTERNAL PRESSURE DROP OF ONE (1 0) PSIG
 - b. THE AIR TEST IS ACCEPTABLE IF ELAPSED TIME FOR AN INTERNAL PRESSURE DROP OF ONE (1 0) PSIG IS NO LESS THAN SHOWN IN THE FOLLOWING TABLE (FOR THERMOPLASTIC OR DUCTILE IRON SEWER LINES).

PIPE DIAMETER (INCHES)	MINIMUM TIME (MIN:SEC)	MAXIMUM LENGTH FOR MINIMUM TIME (FT)	MINIMUM TIME FOR LONGER LENGTH (SEC) L=TOTAL LENGTH
4	3 46	597	0 380L
6	5 40	398	0 854L
8	7 34	298	1 520L

- c. AT EACH MANHOLE CONSTRUCTED WHERE GROUND WATER IS KNOWN TO EXIST:
 - 1) INSTALL A SMALL DIAMETER PIPE NIPPLE THROUGH THE MANHOLE WALL AT THE TIME THAT THE SEWER PIPE IS INSTALLED. LOCATE THE NIPPLE IMMEDIATELY ABOVE THE LOWEST CONNECTING SEWER PIPE, AND GROUT THE NIPPLE IN PLACE CONCURRENTLY WITH GROUTING THE SEWER PIPE.
 - 2) PRIOR TO PLACING THE NIPPLE, WRAP IT WITH A CONTINUOUS LENGTH OF HEAVY NYLON CHORD WHICH CAN BE PULLED OUT, THUS PERMITTING REMOVAL OF THE NIPPLE AFTER TEST WORK IS COMPLETE.
 - 3) JUST BEFORE COMMENCING THE AIR TEST, ATTACH A CLEAR PLASTIC TUBE TO THE NIPPLE, AND HOLD THE TUBE END VERTICALLY UPWARD.
 - 4) AFTER GROUND WATER HAS STOPPED RISING IN THE PLASTIC TUBE, MEASURE THE VERTICAL DISTANCE FROM WATER LEVEL TO PIPE INVERT IN FEET. AVERAGE THIS DISTANCE OBSERVED AT MANHOLES ON EACH END OF THE TEST SEGMENT, AND DIVIDE THE AVERAGE DISTANCE IN FEET BY 2.3 TO OBTAIN THE GROUND WATER PRESSURE TO BE USED IN COMPUTING REQUIRED AIR TEST PRESSURE.
 - 5) PERMANENTLY CORRECT EXCESSIVE LEAKAGE DETERMINED BY AIR TESTING, AND REPEAT OPERATIONS UNTIL ENGINEER WITNESSES A SUCCESSFUL TEST ON EACH LINE SEGMENT OR JOINT. THEN REMOVE NIPPLE THROUGH MANHOLE WITHOUT DISTURBING ADJACENT GROUT. PERMANENTLY CAULK RESULTING HOLE WATERTIGHT



KECK & WOOD, INC.
2750 PREMIERE PARKWAY
SUITE 900
DULUTH, GEORGIA 30097
Phone: (678) 417-4000
Fax: (678) 417-4055
ENGINEERS SURVEYORS
PLANNERS



REVISION DATES			STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION	
			OFFICE: DISTRICT 2 DESIGN - TENNILLE	
			UTILITY RELOCATION PLANS	
			GENERAL NOTES	
				DRAWING No 44-02